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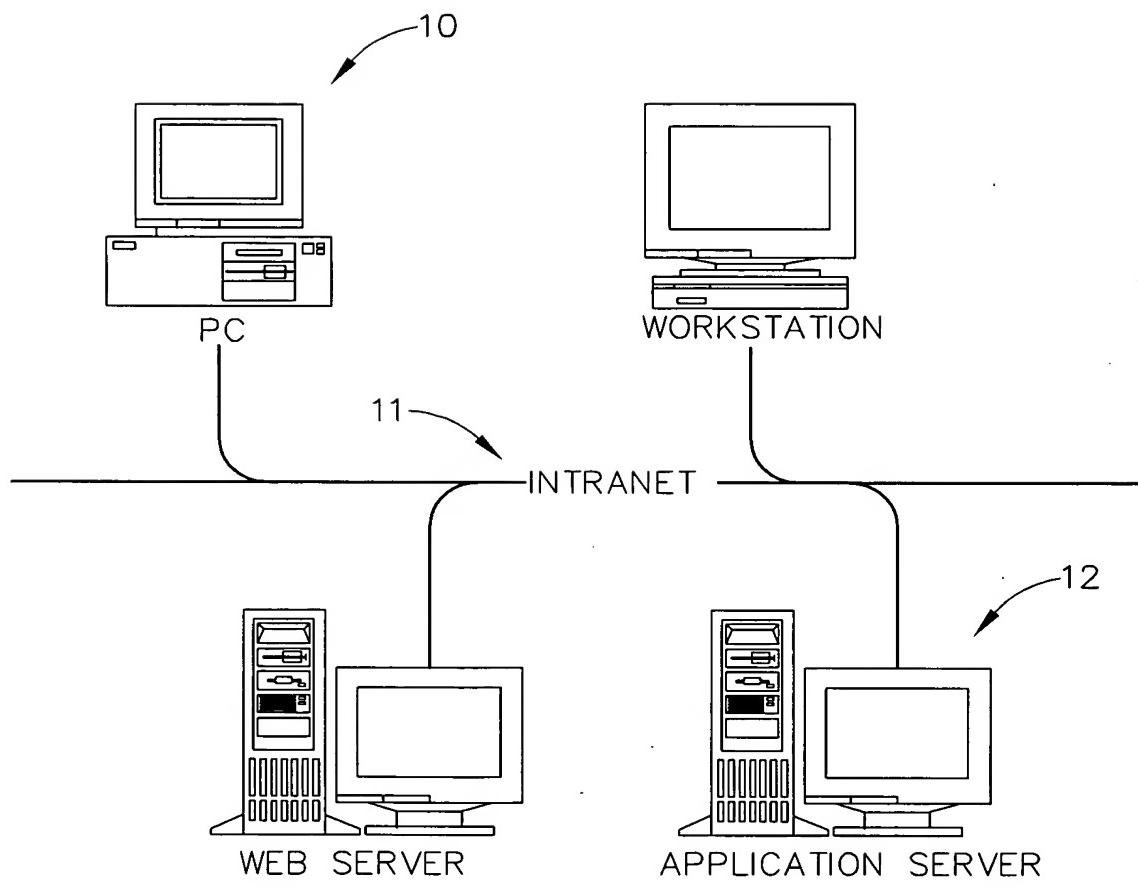


FIG. 1

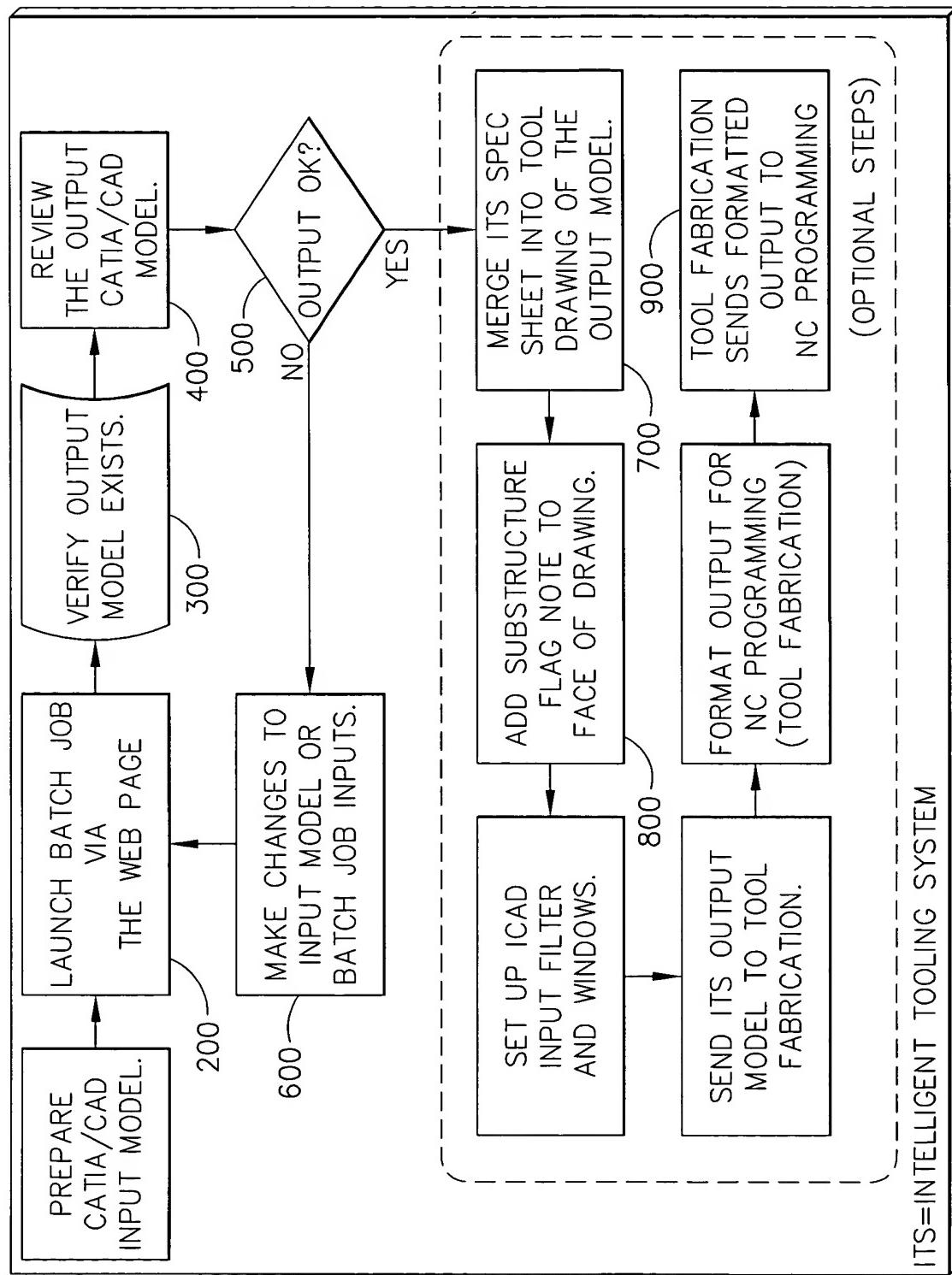


FIG. 2

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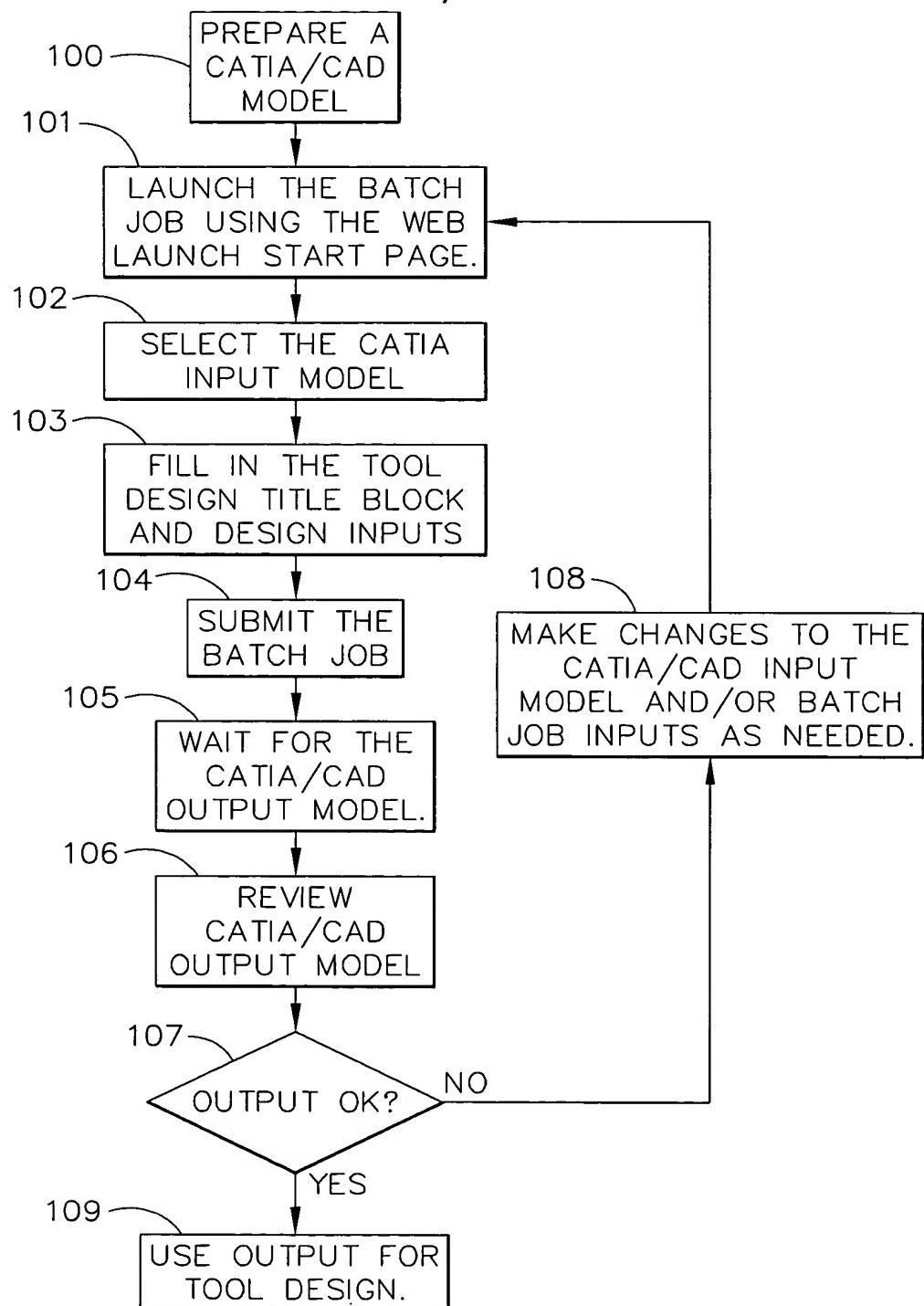


FIG. 3

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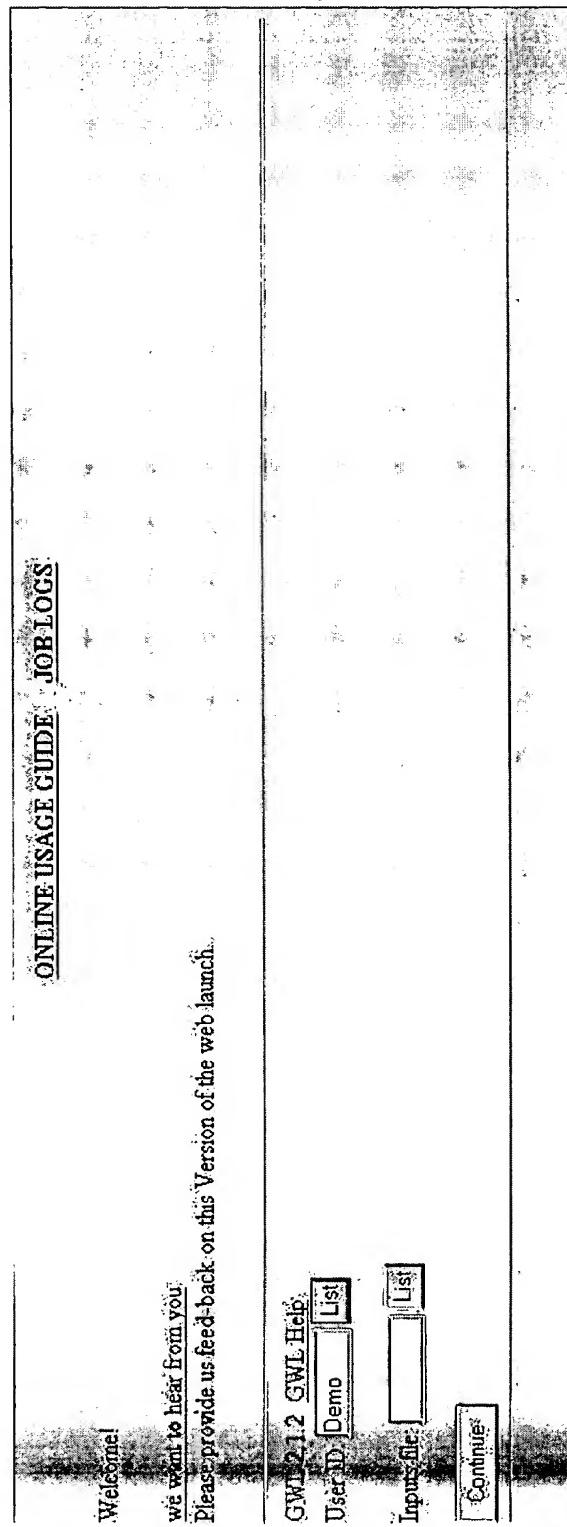


FIG. 4

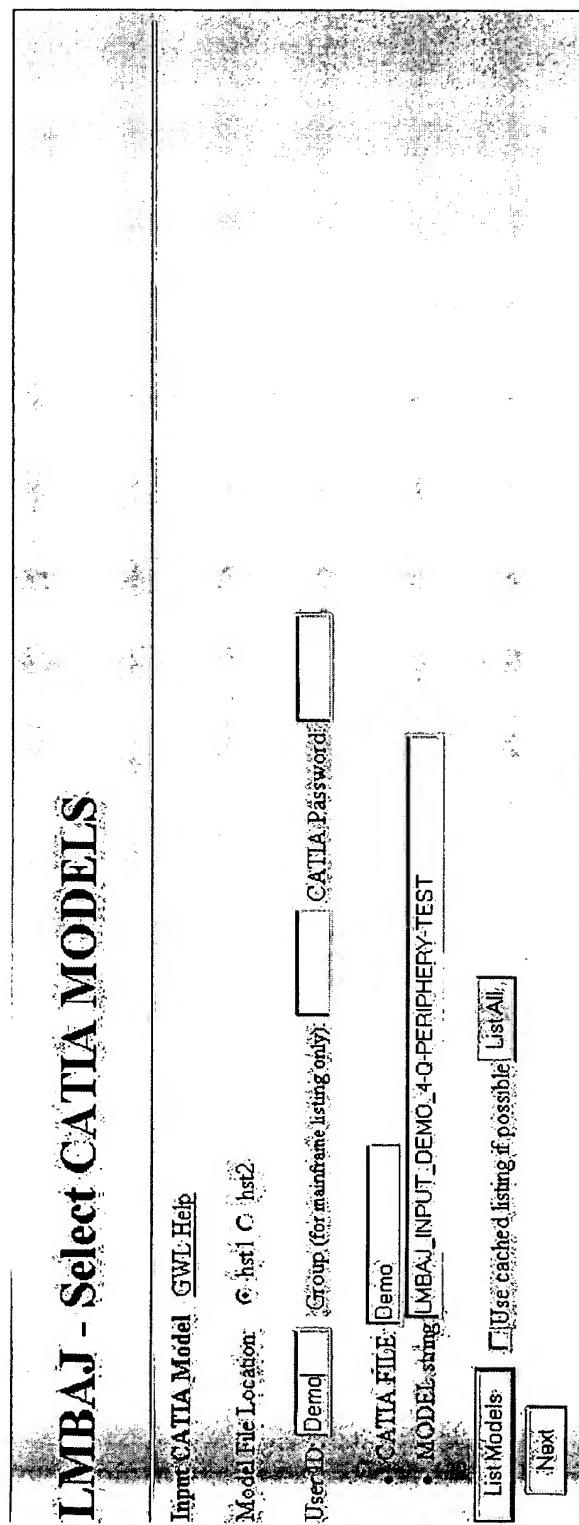


FIG. 5

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Please fill out the form and submit.

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TITLE BLOCK INPUTS

User Name: []
Organization: []
Phone Number: []

Tool Code: [M]
Tool Number: [Demo]
Sheet Number: [1]
Sheet Rev Level: [NEW]
Part Number: []
TDR-TF-CS Number: []

Output the Draw Input Spec Sheet? YES
Output the Comments Page Input Spec Sheet? NO CMS

[Submit Job]

LMBAJ Home Page Online Usage Guide Job Logs Input Demo Videos KBED

FIG. 6

FIG. 7

Form Index	
Please fill out the form and submit. LMBAJ Home Page Online Usage Guide Job Logs Input Demo Videos KBPD	
Title Block	CB = Contoured Bottom
Geometry Input Specs 1	Inside Location Notches? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
Geometry Input Specs 2	Default Layer Offset: <input type="text" value="0"/>
Geometry Input Specs 3	
Top Curve Inputs	
Interlock Slot Inputs	
AC Notch Inputs	
Diagonal Inputs	
Lightening Hole Set Inputs	
Output Options	
GEOGRAPHY INPUT SPECS 1	
Thickness & Type(s) Color(s) Layer(s) Offset n Layers	
Top Surface Parts: <input checked="" type="checkbox"/> Face <input type="checkbox"/> Planer-face <input type="checkbox"/> Surface	
Q-Periphery Locations: Thk: <input type="text" value="1"/> Type: <input checked="" type="checkbox"/> Line <input checked="" type="checkbox"/> Plane	
Q-Interior Header Locations: Thk: <input type="text" value="1"/> Type: <input checked="" type="checkbox"/> Line <input checked="" type="checkbox"/> Plane	
Q-Interior Intercostal Locations: Thk: <input type="text" value="1"/> Type: <input checked="" type="checkbox"/> Line <input checked="" type="checkbox"/> Plane	
Q-CB-Interior Header Locations: Thk: <input type="text" value="25"/> Depth: <input type="text" value="40"/> Overhang: <input type="text" value="0.0"/> Fillet Radius: <input type="text" value="25"/> LH? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES Type: <input type="checkbox"/> Line <input type="checkbox"/> Plane	
Q-CB-Interior Intercostal Locations: Thk: <input type="text" value="1"/> Depth: <input type="text" value="8"/> Overhang: <input type="text" value="1"/> Fillet Radius: <input type="text" value="25"/> LH? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES Type: <input checked="" type="checkbox"/> Line <input type="checkbox"/> Plane	

[Submit Job]

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<u>IMBAI Home Page</u>	<u>Online Usage Guide</u>	<u>Job Logs</u>	<u>Input Demo Videos</u>	<u>KBED</u>																																				
<h2 style="text-align: center;">GEOMETRY INPUT SPECS 2</h2>																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Thickness & Type(s)</th> <th style="width: 20%;">Color(s)</th> <th style="width: 20%;">Layer(s)</th> <th style="width: 20%;">Offset n Layers</th> </tr> </thead> <tbody> <tr> <td> Q-Bottom Stiffener Intercostal Locations: Thk: <input type="text" value="25"/> Height: <input type="text" value="6.0"/> Overhang: <input type="text" value="0.0"/> Fillet Radius: <input type="text" value="25"/> LH? <input checked="" type="checkbox"/> NO C YES Type: <input checked="" type="checkbox"/> Line <input type="checkbox"/> Plane </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Contour Seam Support Locations: Thk: <input type="text" value="25"/> Depth: <input type="text" value="4.0"/> Type: <input type="checkbox"/> Line <input checked="" type="checkbox"/> Plane </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Diagonal CB Intercostal Locations: Thk: <input type="text" value="25"/> Type: <input type="checkbox"/> Line <input type="checkbox"/> Plane </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Diagonal Interior Intercostal Locations: Thk: <input type="text" value="25"/> Type: <input type="checkbox"/> Line <input type="checkbox"/> Plane </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Snap to Diagonal Locations: <input type="checkbox"/> Line <input type="checkbox"/> Plane </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Diagonal Locations: <input type="checkbox"/> Line <input type="checkbox"/> Plane </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Layout Area Solids: <input checked="" type="checkbox"/> Solid </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> <tr> <td> Lightening Hole Layout Area Solids: <input checked="" type="checkbox"/> Solid </td> <td> <input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red </td> <td> <input type="checkbox"/> default </td> <td></td> </tr> </tbody> </table>					Thickness & Type(s)	Color(s)	Layer(s)	Offset n Layers	Q-Bottom Stiffener Intercostal Locations: Thk: <input type="text" value="25"/> Height: <input type="text" value="6.0"/> Overhang: <input type="text" value="0.0"/> Fillet Radius: <input type="text" value="25"/> LH? 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Title Block Geometry Input Specs 1 Geometry Input Specs 2 Geometry Input Specs 3 Top Curve Inputs Interlock Slot Inputs AC Notch Inputs Diagonal Inputs Lightening Hole Set Inputs Output Options																																								

FIG. 8

FIG. 9

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Diagonal Inputs																																							
Lightening Hole Set Inputs																																							
Output Options																																							
GEOMETRY INPUT SPECS 3 <small>Non-Quick Sketch Supports</small> <table border="1"> <thead> <tr> <th>Thickness & Type(s)</th> <th>Color(s)</th> <th>Layer(s)</th> <th>Offset n Layers</th> </tr> </thead> <tbody> <tr> <td>Periphery Locations: Thk: <input type="checkbox"/> (See Input Specs 1). Type: <input type="checkbox"/> Line <input type="checkbox"/> Plane</td> <td><input type="checkbox"/> White <input type="checkbox"/> Cyan <input type="checkbox"/> Yellow <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Magenta <input type="checkbox"/> Red</td> <td></td> <td><input type="checkbox"/> See Specs 1</td> </tr> <tr> <td>Interior Header Locations: Thk: <input type="checkbox"/> (See Input Specs 1). 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<h2>Form Index</h2>				
<h3>Top CRV Creation Inputs</h3>				
<ul style="list-style-type: none">• Top Curve Creation Method: <input checked="" type="checkbox"/> Solids				
<h4>Point Collection:</h4>				
<p>Please fill out the form and submit.</p> <ul style="list-style-type: none">• Number of X projections: <input type="text" value="1"/>• Approximate spacing: <input type="text" value="30"/>• Spacing Factor: <input type="text" value="2.15"/>				
<h4>Top Curve Modification:</h4>				
<ul style="list-style-type: none">• Basis Offset: <input type="text" value="0.0"/>• Smoothing Radius: <input type="text" value="0.0"/>				
<h4>CTOL (C2) Curve Inputs:</h4>				
<ul style="list-style-type: none">• Create C2 Type Top Curve?: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES• Curve Fitting Tolerance: <input type="text" value="0.05"/>• Degree: <input type="text" value="3"/>				
<h4>Method:</h4> <ul style="list-style-type: none">• Projected Point <input checked="" type="checkbox"/>• Multiple Method?: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				
<h2>[Submit Job]</h2>				

FIG. 10A

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Please fill out the form and submit.

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INTERLOCK SLOT INPUTS

Rounded Corners? NO YES

Slot to Slot Clearance:

Edge Clearance:

Submit Job

FIG. 10B

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Please fill out the form and submit.	LMBAJ Home Page	Online Usage Guide	Job Logs	Input Demo Videos	KBPD
<h2>AIR CIRCULATION NOTCH INPUTS</h2>					
<p>Include Air Circulation notch features? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES Place Notches at Interlock Slot Joints? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES</p>					
<p>Air Circulation Notch type: <input checked="" type="checkbox"/> Filleted notch <input type="checkbox"/> Chamfered notch</p>					
<p>Minimum Separation: <input type="text" value="2.25"/> Max Notch Width: <input type="text" value="3.5"/> Min Notch Width: <input type="text" value="1.0"/> Notch Depth: <input type="text" value="2.0"/> Notch fillet Radius: <input type="text" value=".75"/></p>					
<p>Spacing Curve Smoothing Inputs</p> <ul style="list-style-type: none">• Smooth Out AC Set-Spacing Curve? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES• Spacing Curve Smoothing radius: <input type="text" value="0.50"/>					
<p>Thin Solid Area Test Inputs</p> <ul style="list-style-type: none">• Check front and rear of notch for thin area? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES• Offset Test Distance: <input type="text" value="0.25"/>• Minimum Test Angle: <input type="text" value="30.0"/>					
<p>Basis Area vs Final Area Test M4</p> <ul style="list-style-type: none">• Check Area Using Area Test M4? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES• Test Factor: <input type="text" value="3/4"/>					
<p>[Submit Job]</p>					

FIG. 10C

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Please fill out the form, and submit.

LMBAJ Home Page Online Usage Guide Job Logs Init Demo Videos KBD

Form Index

DIAGONAL INPUTS

All Diagonal Types:

- Thickness:
- Height:

Snap-to Diagonals:

- Solving Tolerance:
- Use 2nd Algorithm?: YES
- Maximum Number of Iterations:
- Solved Length Clearance:
- Stayout Area Added Clearance:

AC Notch Inputs

Diagonal Inputs

Lightening Hole Set Inputs

Output Options

[Submit Job]

FIG. 10D

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Please fill out the form and submit.

IMBAJ Home Page	Online Usage Guide	Job Logs	Input Demo Videos	KBPD
<h2>LIGHTENING HOLE INPUTS</h2>				
Form Index	LIGHTENING HOLE INPUTS			
Title Block:				
Geometry Input Specs: 1				
Geometry Input Specs: 2	Include Lightening Hole features? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES			
Geometry Input Specs: 3	Lightening Hole type: <input checked="" type="checkbox"/> Blended Rectangle <input type="checkbox"/>			
Top Curve Inputs:	Stacked Lightening Hole features? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES			
Interlock Slot Inputs:	<ul style="list-style-type: none">• Fillet Radius: <input type="text" value="1.25"/>• Separation: <input type="text" value="2"/>• Stack separation: <input type="text" value="1.75"/>• End separation: <input type="text" value="1.5"/>• Base edge margin: <input type="text" value="1.5"/>• Top Offset: <input type="text" value="2.5"/>• Max hole width: <input type="text" value="21"/>• Min hole width: <input type="text" value="6"/>• Max hole height: <input type="text" value="20"/>• Min hole height: <input type="text" value="6"/>• Use Unlimited Holes? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES• Valid Hole Test Factor: <input type="text" value="1.0"/>			
AC Notch Inputs:	Stayout Area Inputs:			
Diagonal Inputs:	<ul style="list-style-type: none">• Stayout Area Offset Distance: <input type="text" value="23"/>			
Lightening Hole Set Inputs:				
Output Options:				
Submit Job				

FIG. 10E

Form Index	
Title Block	Output Options
Geometry Input Specs 1	<ul style="list-style-type: none"> • All Supports CATIA Output Method: <input checked="" type="checkbox"/> Inner Domain Solid <input checked="" type="checkbox"/>
Geometry Input Specs 2	<ul style="list-style-type: none"> • Solid Modeler Mode: In-Memory <input checked="" type="checkbox"/> [Use :Local for large or complex Tools]
Top Curve Inputs	<ul style="list-style-type: none"> • CATIA v4 output formatted for CATIA v5? <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/> YES [Create a detail for each Support -> v5 Parts]
Interlock Slot Inputs	
AC Notch Inputs	
Diagonal Inputs	
Lightening Hole Set Inputs	
Output Options	<ul style="list-style-type: none"> • Test for like Supports for each Support Type? <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/> YES (<input checked="" type="checkbox"/> Products) • Create Sub-Assemblies for each Support Type? <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/> YES (<input checked="" type="checkbox"/> Products) • Create a Sub-Assembly for Diagonals? <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/> YES (<input checked="" type="checkbox"/> Products) • Support Sketch Location: Left <input checked="" type="checkbox"/> • Output Supports As: <input checked="" type="checkbox"/> Inner Domain Solid <input checked="" type="checkbox"/> Outer Domain Solid
[Submit Job]	

FIG. 1 OF

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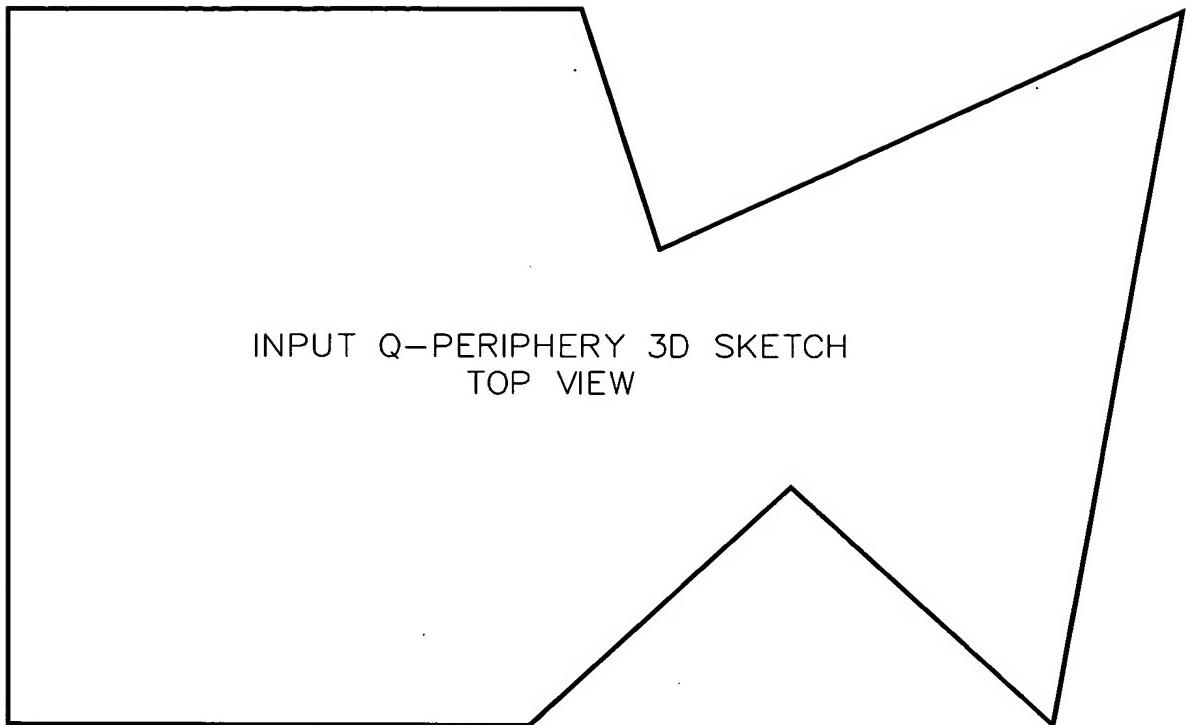


FIG. 11

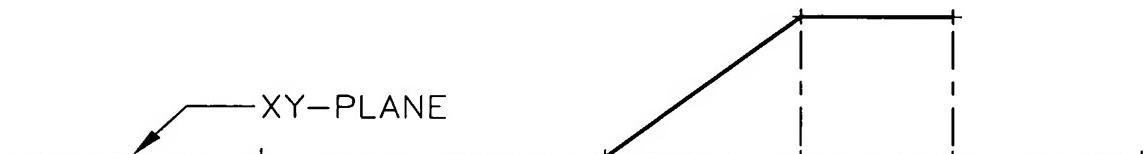


FIG. 12

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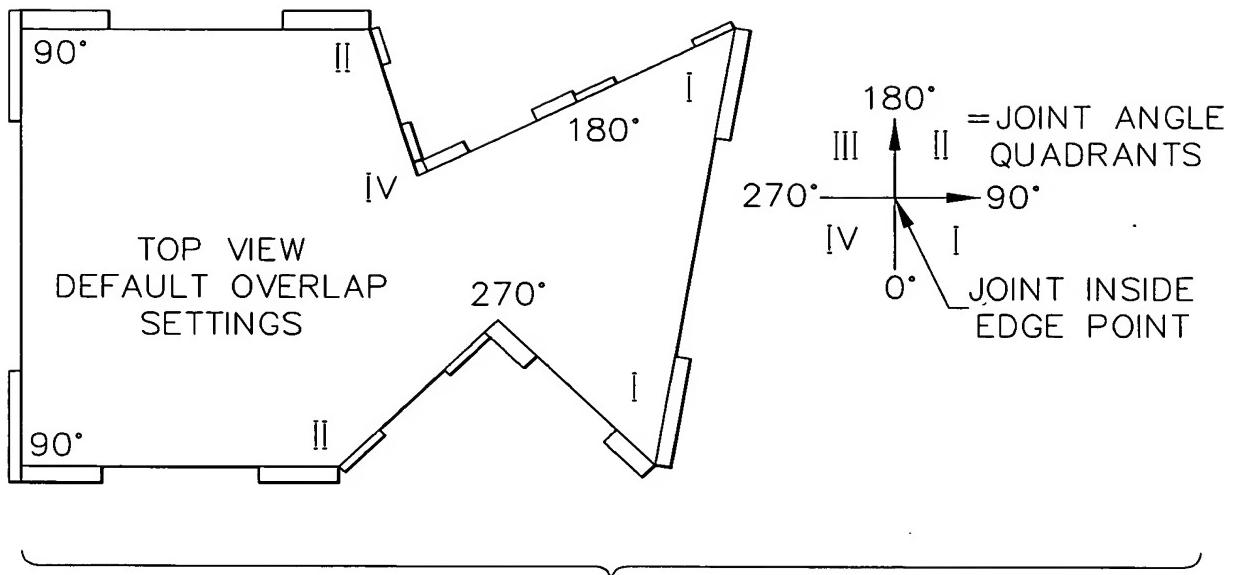


FIG. 13A

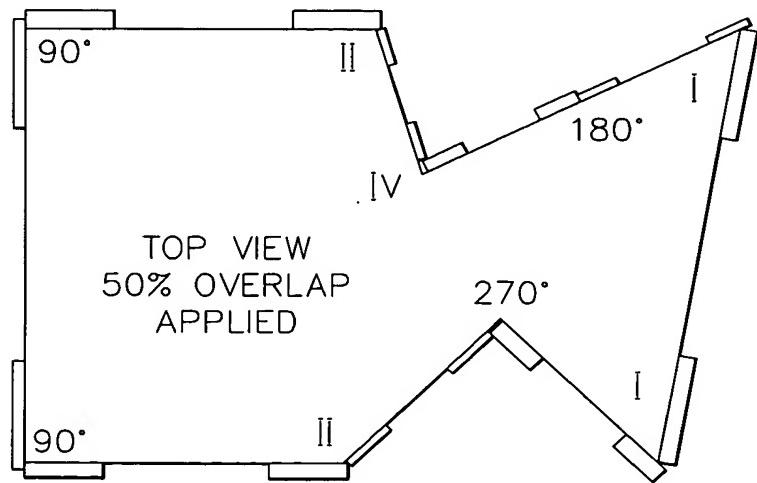
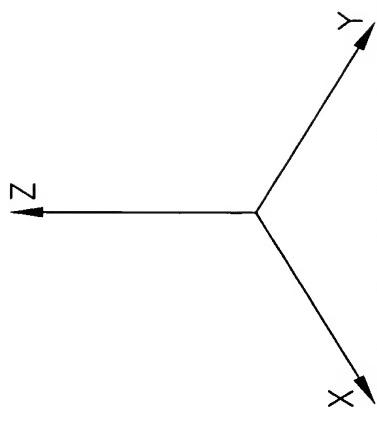


FIG. 13B

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Wednesday, June 19, 1996, 12:18:22am

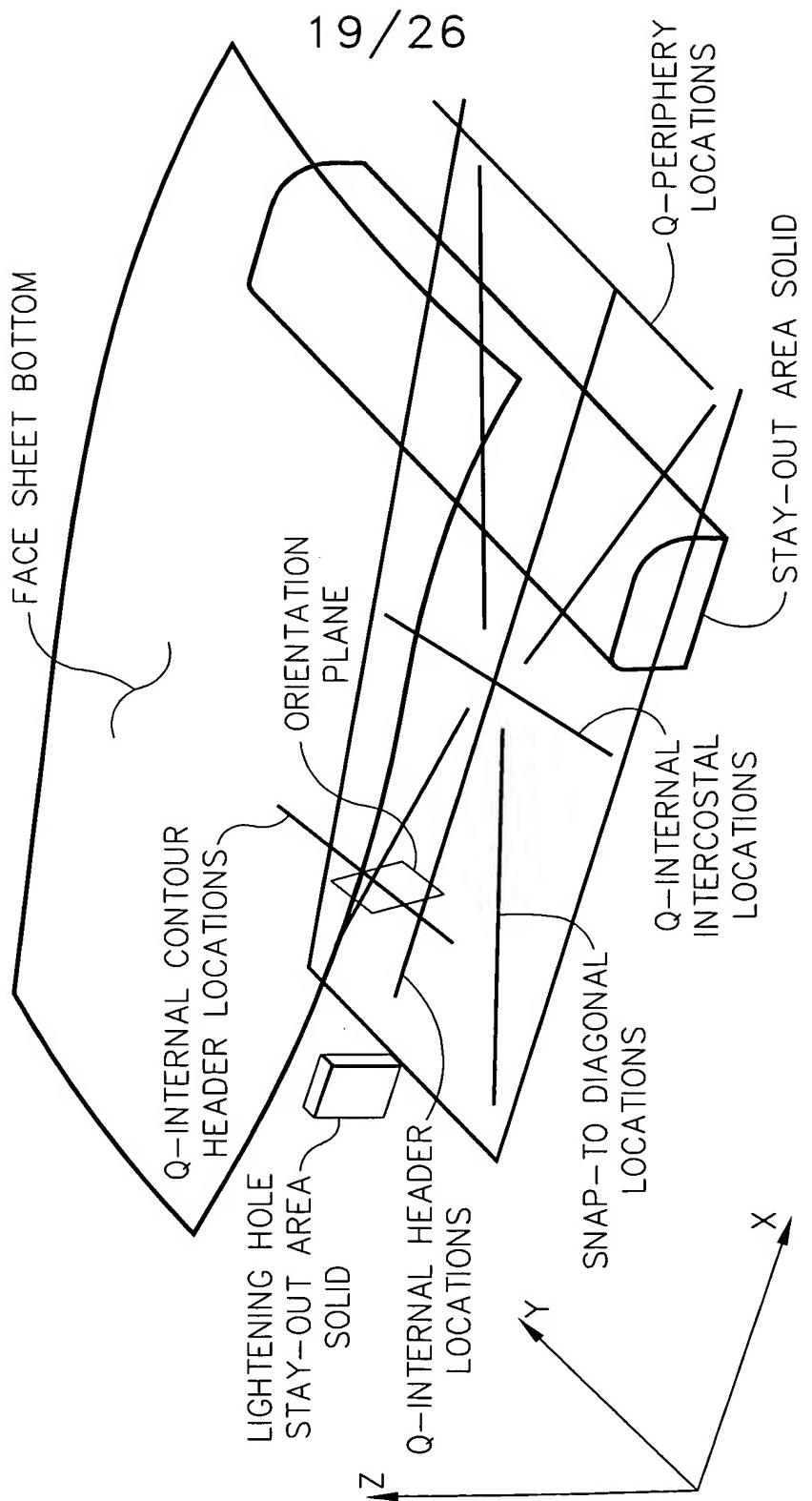
AN ERROR OCCURER DURING
THE BC2ICAD BATCH JOB

Unique job #: ETE030.D96171.T122633.S670

User: Thomas J. Vanderwiel

Error Msg: Please see FILE+COMMENT for batch job information.

FIG. 14



QUICK 3D INPUT SKETCH

FIG. 15

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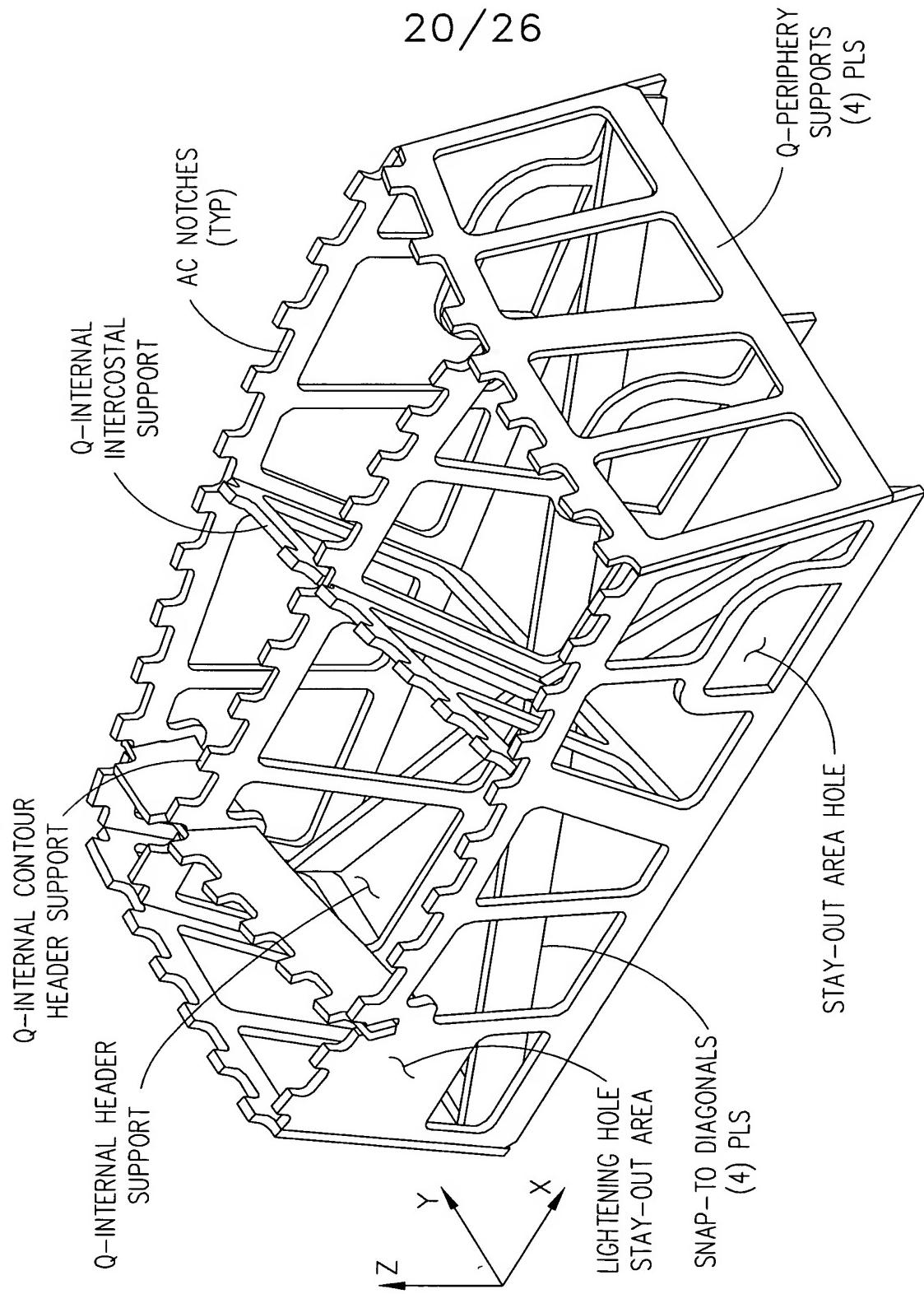


FIG. 16A

3D SPACE OUTPUT

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ITS Intelligent Tooling System		CAD Input Spec Sheet		CAD Input Spec Sheet	
Job Data		Tool Info		Tool Info	
Date:	7/6/1999	Tool Code:	LW	Tool Code:	LW
Icad Version:	7.0.1	Tool Number:	123X4567-TEST	Tool Number:	123X4567-TEST
Application:	Eggcrate Substructure Module	Sheet Number:	1	Sheet Number:	1
Version:	11	Sheet Rev Level:	NEW	Sheet Rev Level:	NEW
Name:	John Doe	Part Number:	1	Part Number:	1
Organization:	A-1021	Idr Tf Cs Number:	11234567	Idr Tf Cs Number:	11234567
Phone Number:	555-5555	Phone Number:	555-5555	Phone Number:	555-5555
Input Attribute		Value		Value	
Periphery Support Thk:	0.375	Lh Stack Separation:	1	Lh Stack Separation:	1
Interior Support Thk:	0.25	Lh Max Hole Height:	12	Lh Max Hole Height:	12
Contour Seam Support Thk:	0.25	Lh Min Hole Height:	6	Lh Min Hole Height:	6
Contour Seam Support Depth:	4	Lh Double Truss:	T	Lh Double Truss:	T
Periphery Support Layer:	NIL	Lh Single Truss Pattern:	ALTERNATE-STACK-AND-SUBSET	Lh Single Truss Pattern:	ALTERNATE-STACK-AND-SUBSET
Interior Intercostal Support Layer:	NIL	Lh Stayout Area Solids:	NIL	Lh Stayout Area Solids:	NIL
Interior Header Support Layer:	NIL	Lh Remove Holes That Touch?:	NIL	Lh Remove Holes That Touch?:	NIL
Contour Seam Support Layer:	NIL				
Reduce Bspline Segmentation For Output?	NIL				
Reduce Bsplines To Lines For Output?:	NIL				
Reduce Bspline To Lines Chord Ht:	0.01				
Reduce Bspline To Lines Chord Ht Tal:	0.005				
Ac Include Air Circulation Notch Features?:	T				
Ac Notch Pattern:	FILLETED-NOTCH				
Ac Min Separation:	2.0				
Ac Min Notch To Notch Separation:	1.7				
Ac End Separation:	1.0				
Ac Notch Depth:	2.0				
Ac Max Notch Width:	4.0				
Ac Min Notch Width:	2.5				
Ac Notch Fillet Radius:	0.5				
Ac Default Fit Factor:	0.6				
Ac Bottom Fit Factor:	0.6				
Lh Include Lightening Hole Features?:	T				
Lh Type:	BLENDED-RECTANGLE				
Lh Fillet Radius:	0.5				
Lh Max Hole Width:	22				
Lh Min Hole Width:	6				
Lh Truss Thickness:	1				
Lh Stacked Holes?:	T				

FIG. 16B
(Input Spec Sheets)

2D Draw

Page 1 of 2

Page 2 of 2

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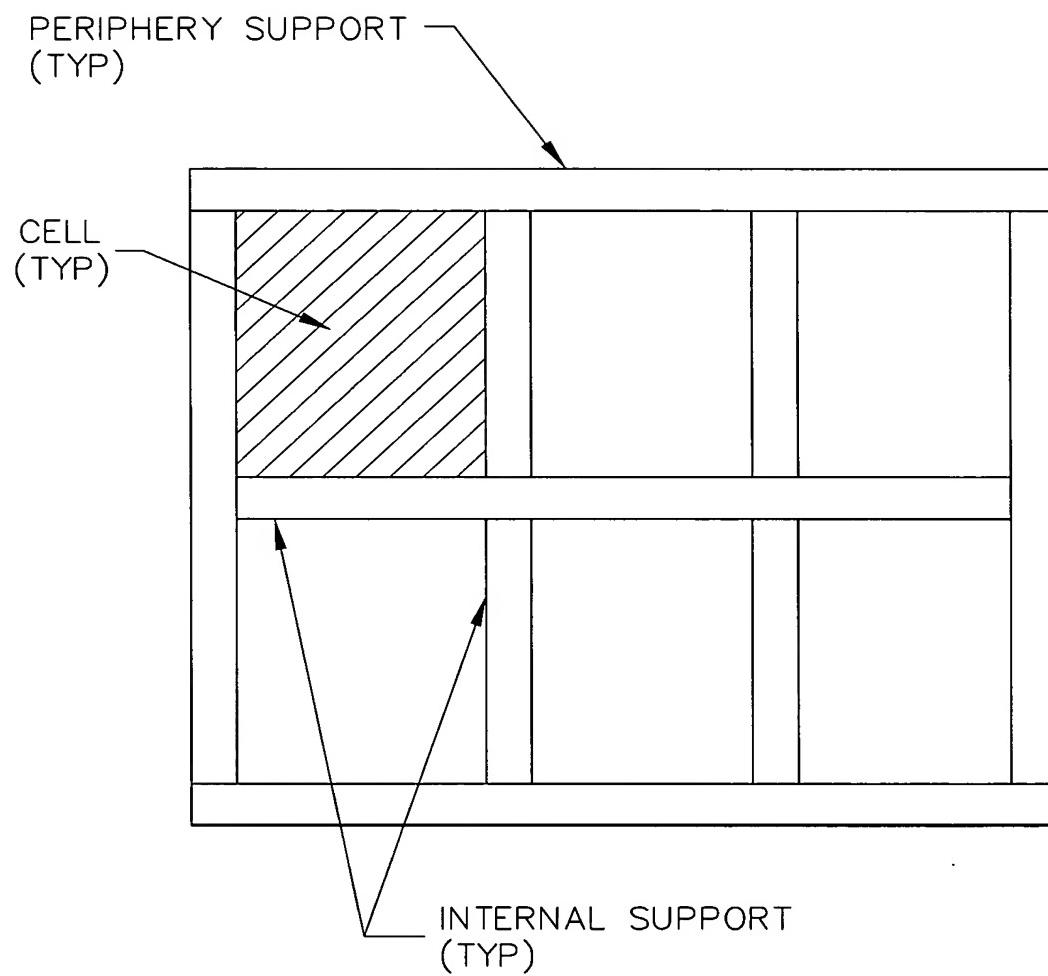


FIG. 17

START AND END SNAP POINT TYPES:	
SNAP POINT START CORNER SKETCHED BOTTOM CENTERLINE	SNAP POINT START FACE SKETCHED BOTTOM CENTERLINE CELL SOLVED DIAGONAL SNAP POINT END CORNER SUPPORTS (TYP) FACE TO FACE
SNAP POINT START CORNER SKETCHED BOTTOM CENTERLINE CELL SOLVED DIAGONAL SNAP POINT END CORNER SUPPORTS (TYP) CORNER TO CORNER OR FACE TO CORNER	SNAP POINT START CORNER SKETCHED BOTTOM CENTERLINE CELL SOLVED DIAGONAL SNAP POINT END CORNER SUPPORTS (TYP) CORNER TO CORNER OR FACE TO CORNER

FIG. 18

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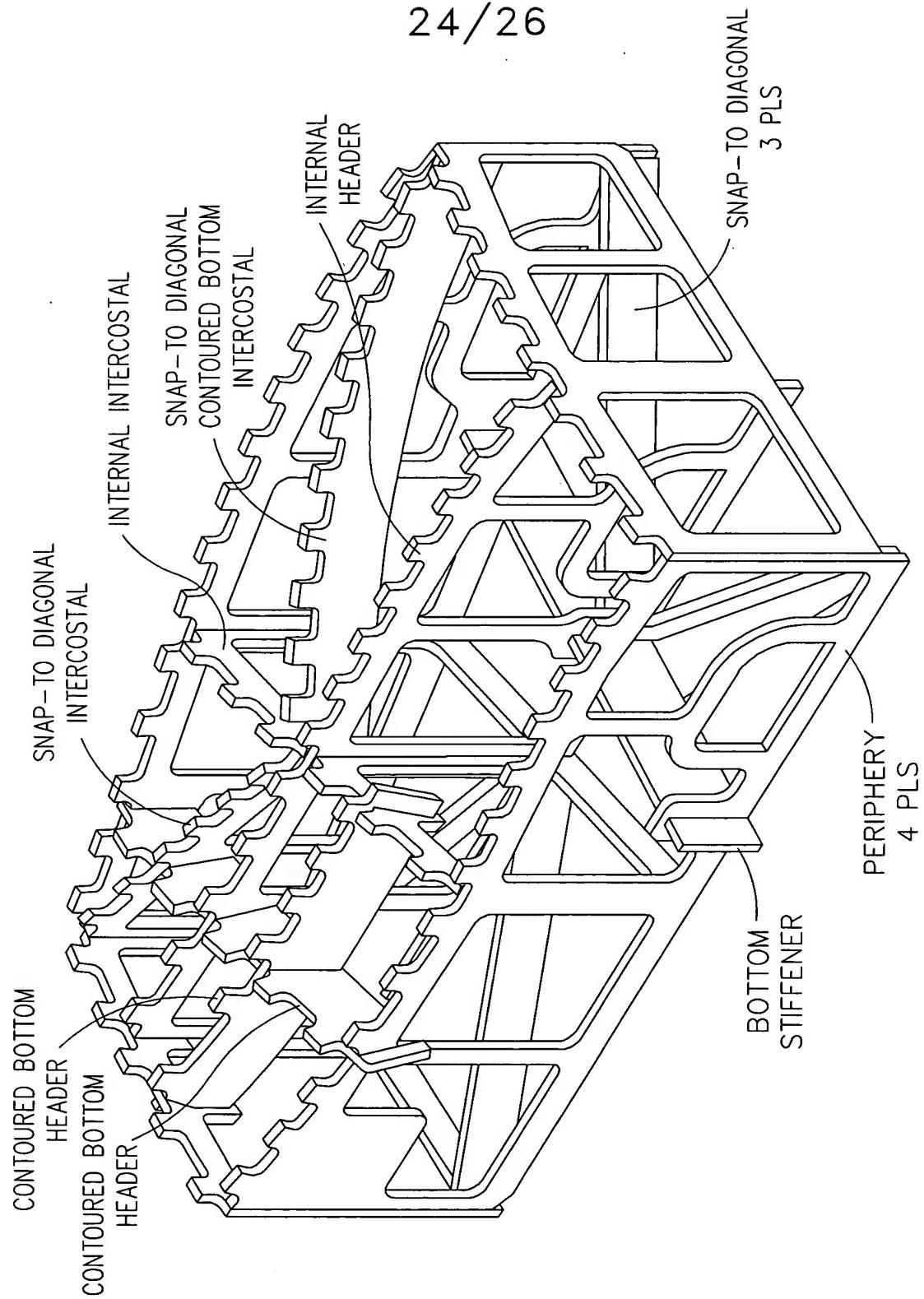


FIG. 19

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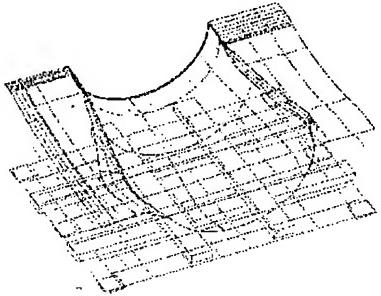
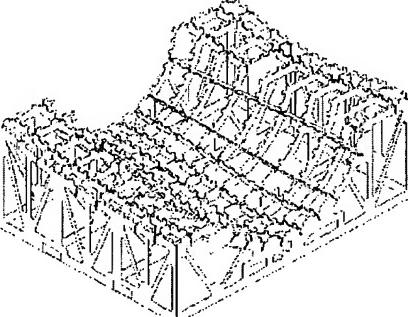
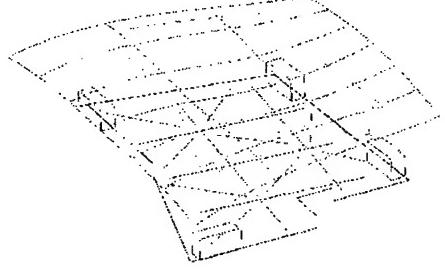
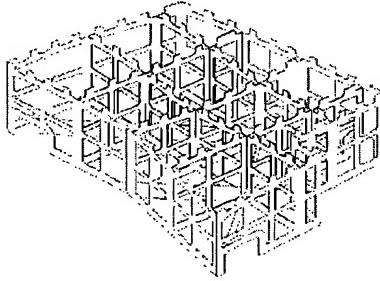
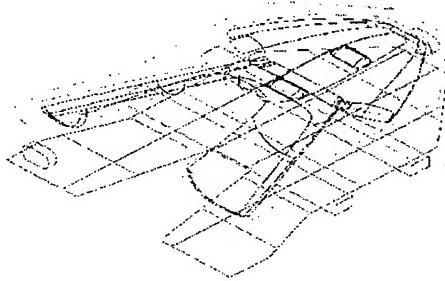
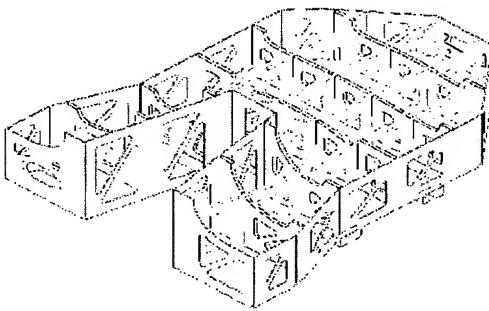
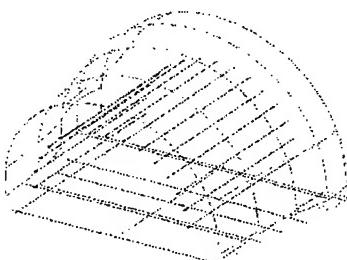
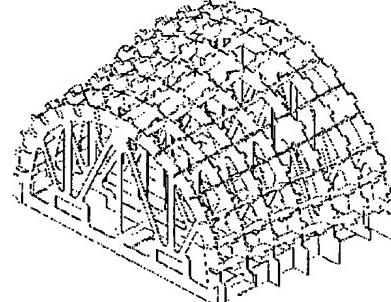
INPUTS	OUTPUTS
	
	
	
	

FIG. 20A

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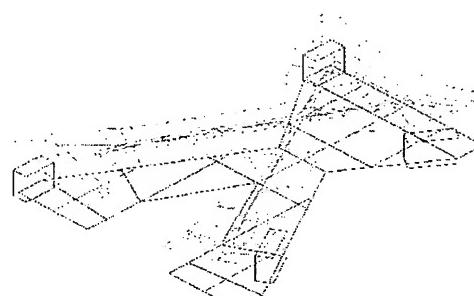
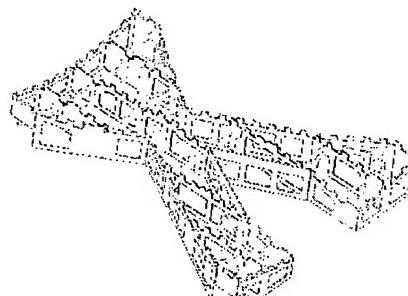
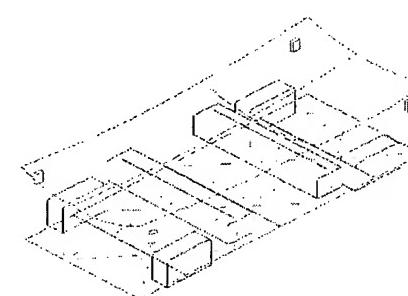
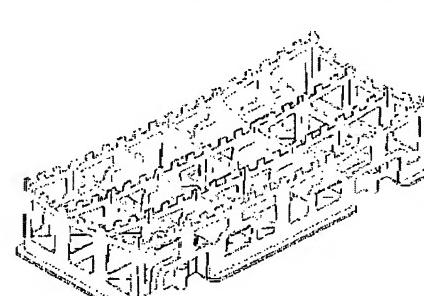
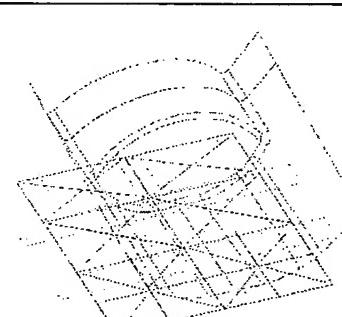
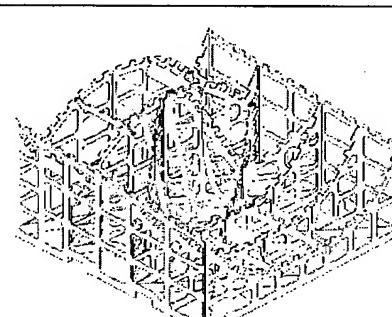
INPUTS	OUTPUTS
	
	
	

FIG. 20B